

Food production

Mark scheme

1.	(a)	30	award <b>both</b> marks for correct answer, irrespective of working $100 - (33 + 27 + 10)$ or equivalent for 1 mark	2
	(b)	2 or 1.98	award <b>both</b> marks for correct answer, irrespective of working $(33 / 100) \times 6$ or <u>equivalent</u> for 1 mark	2
	(c)	respiration		1
	(d)	(i)	less / no heat loss / movement <i>do <b>not</b> accept 'energy' / warmth unqualified</i>	1
		(ii)	any reference to cruelty eg stress to calf / cramped conditions <i>ignore references to disease / hygiene</i>	1
				[7]
2.	(a)	any <b>one</b> from:	<ul style="list-style-type: none"> <li>• increase / give light</li> <li>• increase temperature / make warmer</li> </ul> <p>award marks if the method by which these could be done is given eg leave lights on all night <b>or</b> use a heater</p> <ul style="list-style-type: none"> <li>• increase / give CO<sub>2</sub></li> <li>• add fertiliser / nutrients / minerals / named <i>allow nitrogen</i> <i>ignore 'food'</i></li> </ul>	1
	(b)	(i)	any <b>two</b> from:	2
		(ii)	any <b>two</b> from:	2
			<ul style="list-style-type: none"> <li>• cheaper <i>allow grow faster / more grown</i></li> <li>• better quality / flavour <i>ignore size</i></li> <li>• available all year <i>accept converse if clear that answer refers to use of British tomatoes</i> <i>allow 'Fair Trade'</i></li> </ul> <p>idea of more needed only once</p> <ul style="list-style-type: none"> <li>• transport needs (more) energy / fuel</li> <li>• reference to eg greenhouse effect / global warming / pollution / CO<sub>2</sub> release / carbon footprint <i>ignore ozone</i></li> </ul>	
				[5]

Unit B3, B3.4.4 Mark Scheme

3. (a) scientists figures based on research / calculations / data 1
- or**
- scientists sample whole area  
*ignore reasons based on bias*
- fishermen based on impression / hearsay / experience 1
- or**
- fishermen fish in well-stocked / limited areas
- scientists sample a wider area = 2 marks*  
*fishermen only fish in well-stocked areas = 2 marks*  
*if no marks gained fishermens' opinion **and** scientists' opinion gains 1 mark*
- (b) any **two** from: 2
- economic considerations  
*eg fear for jobs, profits, big demand for cod*
  - political impact  
*eg allow EU / government decide or laws will be passed*
  - pressure groups  
**or**  
fears of extinction

[4]